

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks.

Claim 1 has been amended and new claims 25-27 have been added. Claims 2-7, 10, 11, 15, and 16 have been amended to correct formal matters. Support for the amendments to claim 1 and the limitations of new claims 25-27 can be found at page 8, line 15 through page 9, line 6. No new matter has been added.

§ 103 Rejections

Claims 1-6, 12, 15, and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Koye, U.S. 6,347,488 in view of Haesters, U.S. 5,259,660. Applicants respectfully traverse this rejection.

Koye discloses a cross arm for a utility pole that includes an elongated bar member having a plurality of through-holes for mounting the cross arm to a utility pole with fasteners and for mounting electrical line support insulators. However, Koye fails to disclose a hollow reinforcing member disposed in the interior of the cross arm in alignment with any of the holes.

Haesters discloses a hat-shaped hollow beam 2 having side walls 7 and 8 for a motor vehicle body. Although Haesters discloses a spacer sleeve 6 for mounting between side walls 7 and 8 in alignment with respective mounting holes 9, 10, Applicants submit that features of a support beam for a motor vehicle body is nonanalogous art to the cross arms for a utility pole, as disclosed in Koye. One skilled in the art of utility pole related structures would not be motivated to reference motor vehicle body parts for a teaching of a utility pole cross-arm structure. Therefore, Applicants submit that it would not be obvious to combine the teachings of Koye and Haesters.

Even if Haesters were viewed as having some relevance to the art disclosed in Kaye, Heasters has at least two shortcomings as compared to the claimed invention. First, Haesters discloses a large access opening 11 provided through at least one side wall 7 or 8 adjacent to one of the mounting holes 9, 10. Opening 11 has a diameter greater than the outer diameter of the spacer sleeve 6 so that the spacer sleeve 6 may be inserted inside the hollow beam 2 and aligned with mounting holes 9 and 10 via an alignment tool inserted through opening 11. The mounting holes 9, 10 must be smaller than the inner diameter of spacer sleeve 6 (see column 2, lines 36-40 of Haesters). In contrast, claim 1 requires that “each reinforcing member having a first surface defining an inner diameter that is approximately the same as a diameter of the transverse hole with which the hollow reinforcing member is aligned.” Thus, Haesters fails to disclose that the diameter of the transverse hole and the inner diameter of the reinforcing member are approximately the same.

Second, the spacer sleeve 6 disclosed by Haester is aligned with mounting holes 9 and 10 while the access opening 11 is left open allowing access to an inner volume of the beam 2 along the beam length. In contrast, claim 1 requires that “one hollow reinforcing member being aligned with each transverse hole, . . . wherein each reinforcing member is positioned within the beam such that a separate bolt can be inserted through each transverse hole of the beam and a reinforcing member aligned with each transverse hole.”

Third, Haesters discloses a single spacer sleeve whereas claim 1 requires “a plurality of transverse holes . . . and a plurality of hollow reinforcing members . . . , one hollow reinforcing member being aligned with each transverse hole.” Neither Haesters, Koye, or a combination of these references disclose a plurality of hollow reinforcing members or aligning a hollow reinforcing member with each transverse hole. Therefore, Applicants submit that Koye and

Haesters fail to disclose or suggest every limitation of claim 1, and the claims that depend from it.

Further to the above, there are certain advantages provided by the utility line support structure of claim 1 due to alignment of a hollow reinforcing member with each transverse hole and when the interior diameter of the reinforcing member matches the diameter of the transverse hole. When the holes in the beam are made a minimum size needed to accommodate the fastening hardware, there is minimum reduction in strength of the beam due to the holes. Any hole in the beam that is larger than the inner diameter of the hollow reinforcing member aligned with that hole removes unnecessary material from the beam that reduces beam strength. Further, when the inner diameter of the hollow reinforcing member matches the diameter of the transverse hole in the beam, maximum reinforcement of the hole is possible because the reinforcing member is aligned exactly at the location in the beam where the beam has been weakened by formation of the hole. Still further, by requiring that a hollow reinforcing member is aligned with each hole in the beam, the beam is reinforced at every spot along the beam length that is weakened by the formation of a hole.

Applicants submit that none of the art of record, alone or, in combination, discloses or suggests all of the limitations and related advantages of claim 1. Therefore, claims 1-6, 12, 15, and 16 are non-obvious over the art of record. Withdrawal of the rejection is respectfully requested.

Claims 7-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Koye in view of Haesters and further in view of Fingerson, U.S. 5,605,017, and Hawley's Chemical Dictionary. Applicants respectfully traverse this rejection. As discussed above, Koye and Haesters fail to disclose or suggest a limitation of claim 1. Fingerson and Hawley's Chemical

Dictionary fail to remedy the deficiencies of Koye and Haesters as they relate to claim 1.

Therefore, claims 7-9 are allowable for at least the reason they are dependent upon an allowable base claim. Applicants do not otherwise concede the correctness of this rejection.

Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Koye in view of Haesters and further in view of Fingerson. Applicants respectfully traverse this rejection. As discussed above, Koye and Haesters fail to disclose or suggest a limitation of claim 1. Fingerson fails to remedy the deficiencies of Koye and Haesters as they related to claim 1. Therefore, claim 13 is allowable for at least the reason it is dependent upon an allowable base claim. Applicants do not otherwise concede the correctness of this rejection.

Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Koye in view of Haesters and further in view of Fingerson. As discussed above, applicants submit that Koye and Haesters fail to disclose or suggest a limitation of claim 1. Fingerson fails to remedy the deficiency of Koye and Haesters as they relate to claim 1. Therefore, claim 17 is allowable for at least the reason it is dependent upon an allowable base claim. Applicants do not otherwise concede the correctness of this rejection.

New Claims

New claims 25-27 have been added. Claim 25 requires that the hollow reinforcing member is “in alignment with the transverse hole and in contact with the beam to provide a moisture proof seal with the transverse hole to seal the inner volume of the beam along the entire beam length.” Applicants submit that none of the art of record disclosed or suggest this limitation. In particular, Haesters fails to disclose the sealing function required by claim 25 because the inner volume of the hollow beam 2 is not sealed when the sleeve 6 is positioned in alignment with mounting holes 9, 10 because the hole 11 remains open. With the hole 11 open,

the inner volume of the beam is not sealed along its length. Claim 26 further requires first and second sealing caps configured to engage and seal respective first and second ends of the beam.

Claim 27 requires a plurality of hollow reinforcing members, first and second end caps, and a hollow fiber reinforcing beam having a plurality of transverse holes, and "the hollow reinforcing members and the first and second end caps seal all openings into the inner volume of the beam." Applicants submit that none of the art of record disclose sealing all openings into an inner volume of a beam of a utility line support structure using reinforcing members and first and second end caps as required by claim 27. Consideration and allowance of new claims 25-27 is respectfully requested.


Applicants thank the Examiner for the indication of allowable subject matter in claims 10 and 11, and for the allowance of claim 24. Applicants submit that claims 10, 11 and 24 may be allowable for reasons in addition to those stated by the Examiner.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance. If a phone conference would be helpful in resolving any issues related to this matter, please contact Applicants' representative below at 612-371-5387.

Respectfully submitted,

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